

On the application of the foregoing Rules towards discovering the Genera of Plants.

If the reader has properly consulted the different parts of fructification as laid down in the preceding observations, he will with a little practice be able to refer any flower of a common form to its place in the system, which he may consider as a principal step towards the knowledge of Botany.

We shall now begin to examine this, and find by reading the foregoing pages and consulting the parts of fructification, that the Rose is in the class Icosandria, order Polygynia. That in the British Flora there are only two plants in this order having a five-cleft calyx, namely *Rosa* and *Rubus*: and the latter we find has a granulated seed-vessel, by which it is at once distinguished.

The limits of this introductory matter will not allow of our going more at length into this subject. Comparisons should be made with different flowers in this way, accompanied with the descriptions at full length from the *Genera Plantarum*, or any of the translations of that work, and the student thereby will soon be enabled to detect the genus; and from the following abridged characters of the different British plants, aided with a little assistance received practically at our usual lectures, he will understand the science sufficiently to study by himself if assisted by a few books, wherein more copious descriptions are given than this small work will admit of.—The *Genera Plantarum*, or its Translation by the Lichfield Society.—Martyn's Language of Botany: and, if he wishes to pursue this favourite science beyond the limits of British botany, Willdenow's *Species Plantarum*, or Turton's Translation of the vegetable part of Murray's *Systema Naturæ*.

Thus in the examination of the Dog-rose, I find that the stamens are fixed on the calyx, which points it out to belong to the twelfth class Icosandria. I also find the calyx to be a perianthium of five leaves or divisions, with a ventricose tube; the divisions of the calyx are spreading, of an oval shape, and sharp-pointed.

The COROLLA is composed of five petals, reversely heart-shaped, the length of and inserted into the neck of the calyx.

STAMENS.—Filaments numerous, capillary, short, inserted like the petals into the neck of the calyx. The anthers are three-cornered.

PISTILS.—Germs numerous in the bottom of the calyx, styles of the same number, villous, very short, inserted into the side of the germ, stigma obtuse.

PERICARP.—A berry of a top-shape, fleshy, one-celled, contracted in the neck from the operation of the persisting calyx.

SEEDS many, oblong, hispid, affixed to the interior side of the pericarp.

Thus have we regularly delineated the generic character of the Dog-rose (*Rosa*) at full length, which is all that is necessary to give

a distinguishing mark from any other flower in the same class and order.

We shall hereafter enumerate all the different Genera comprised in the British Flora as they stand in the classes and orders, with their descriptions: but it should be understood that in doing this the limits of this Pocket Compendium will not admit of going into the characters at full length.

We shall therefore content ourselves with describing them by their essential characters alone, *i. e.* those *particular marks* and forms of the parts of fructification, which distinguish them from the other allied genera.

The next SUBDIVISION, *i. e.*

THE SPECIES OF PLANTS,

is formed from the characters drawn either from the particular shape of the leaves, flowers, branches, roots, &c. &c. These we must also for the above reasons describe by their essential characters also.

It will however be necessary for the student to understand a little of terminology, as descriptive of the different parts which the species of plants are determined from; and by a little attention he will be enabled soon to find out the name of any plant he may meet with; as nothing more will be wanting than practical investigation, made by studying the plants in their places of growth, and comparing them with their written descriptions.

ROOT (*Radix*). This is generally considered that part of the plant which is under ground, and which draws nourishment from the earth, necessary to the plant's existence.

TRUNK (*Truncus*). This in its structure is very similar to the root; so much so indeed, that Linnæus has considered the stalk as a root above ground. And we find that the generality of stalks may by artificial modes be caused to throw out roots. Hence the mode of propagating plants by cuttings.

Under this head may be considered the following, *viz.*—

THE CAULIS. A stalk supporting both the leaves and fructification.

CULMUS (*Straw*). A stalk peculiar to the grasses and all kinds of grain.

STIPES. A kind of stalk peculiar to the Fungi. It is also used to signify the stem supporting the Ferns and Palms.

BRANCHES (*Rami*). An extension of the trunk. After the first year's growth they divide to considerable extent, and become larger and more spreading as the tree increases in growth.

LEAVES (*Folia*). These are defined to be fibrous and cellular, and to differ greatly in form and size: they are however mostly flat, and appear to be the same as the branches, only differing in structure. Leaves